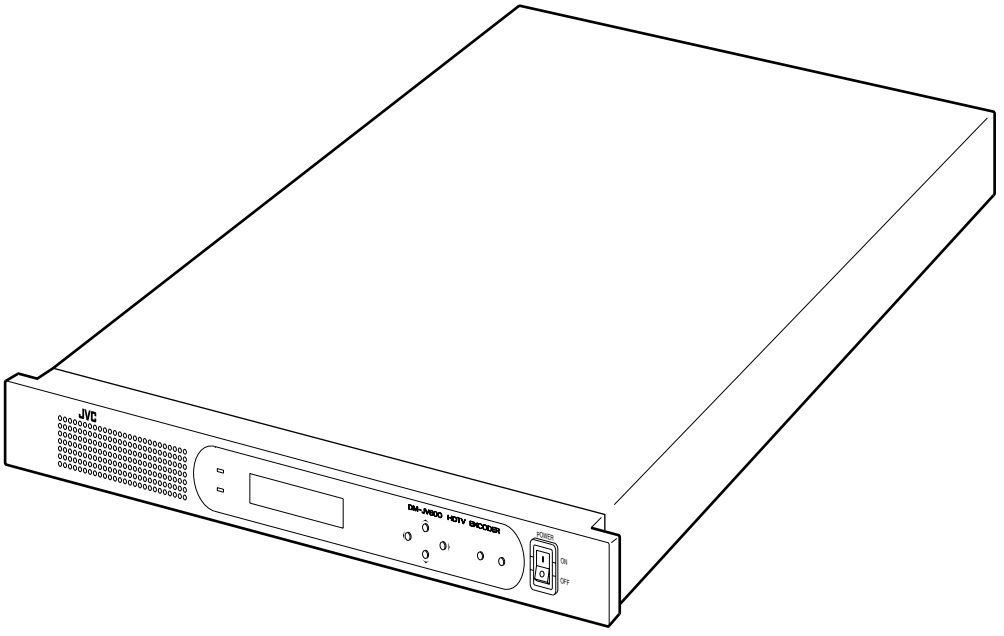
JVC®

HDTV ENCODER

DM-JV600U

INSTRUCTIONS



Thank you for purchasing this JVC product.
Before operating this unit, please read the instructions carefully to ensure the best possible performance.

For Customer Use:

Enter below the Serial No. which is located on the rear of cabinet. Retain this information for future reference.

Model No. DM-JV600U

Serial No. _____

This instruction book is made from 100% recycle paper.

LST0159-001A

IMPORTANT SAFEGUARDS

1. Read all of these instructions.
2. Save these instructions for later use.
3. All warnings on the product and in the operating instructions should be adhered to.
4. Unplug this appliance system from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
5. Do not use attachments not recommended by the appliance manufacturer as they may cause hazards.
6. Do not use this appliance near water – for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, etc.
7. Do not place this appliance on an unstable cart, stand, or table. The appliance may fall, causing serious injury to a child or adult, and serious damage to the appliance.
   Use only with a cart or stand recommended by the manufacturer, or sold with the appliance.
   Wall or shelf mounting should follow the manufacturer's instructions, and should use a mounting kit approved by the manufacturer.
   An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

8. Slots and openings in the cabinet and the back or bottom are provided for ventilation, and to insure reliable operation of the appliance and to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the appliance on a bed, sofa, rug, or other similar surface. This appliance should never be placed near or over a radiator or heat register. This appliance should not be placed in a built-in installation such as a bookcase unless proper ventilation is provided.
9. This appliance should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your home, consult your dealer or local power company. For appliance designed to operate from battery power, refer to the operating instructions.
10. This appliance system is equipped with a 3-wire grounding type plug (a plug having a third (grounding) pin). This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding plug.
11. For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.
12. Do not allow anything to rest on the power cord. Do not locate this appliance where the cord will be abused by persons walking on it.
13. Follow all warnings and instructions marked on the appliance.
14. Do not overload wall outlets and extension cords as this can result in fire or electric shock.
15. Never push objects of any kind into this appliance through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the appliance.
16. Do not attempt to service this appliance yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
17. Unplug this appliance from the wall outlet and refer servicing to qualified service personnel under the following conditions:
    a. When the power cord or plug is damaged or frayed.
    b. If liquid has been spilled into the appliance.
    c. If the appliance has been exposed to rain or water.
    d. If the appliance does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the appliance to normal operation.
    e. If the appliance has been dropped or the cabinet has been damaged.
    f. When the appliance exhibits a distinct change in performance – this indicates a need for service.
18. When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
19. Upon completion of any service or repairs to this appliance, ask the service technician to perform routine safety checks to determine that the appliance is in safe operating condition.

SAFETY PRECAUTIONS

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING:
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

This unit should be used with 120 V AC only.

CAUTION:
To prevent electric shocks and fire hazards, DO NOT use any other power source.

NOTE:
The rating plate (serial number plate) is on the rear of the unit.

INFORMATION for USA
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CAUTION
CHANGES OR MODIFICATIONS NOT APPROVED BY JVC COULD VOID USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.

INFORMATION for Canada
This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations. Cet appareil numérique de la classe A respecte toutes les exigences du Reglement sur le matériel brouilleur de Canada.

ATTENTION

RISQUE D'ELECTROCUTION
NE PAS OUVRIR

ATTENTION: POUR EVITER TOUT RISQUE D'ELECTROCUTION
NE PAS OUVRIR LE BOITER.
AUCUNE PIECE INTERIEURE N'EST
A REGLER PAR L'UTILISATEUR.
SE REFERER A UN AGENT QUALIFIE EN CAS DE PROBLEME.

Le symbole de l'éclair à l'intérieur d'un triangle équilatéral est destiné à alerter l'utilisateur sur la présence d'une "tension dangereuse" non isolée dans le boîtier du produit. Cette tension est suffisante pour provoquer l'électrocution de personnes.

Le point d'exclamation à l'intérieur d'un triangle équilatéral est destiné à alerter l'utilisateur sur la présence d'opérations d'entretien importantes au sujet desquelles des renseignements se trouvent dans le manuel d'instructions.

*Ces symboles ne sont utilisés qu'aux Etats-Unis.

AVERTISSEMENT:
POUR EVITER LES RISQUES D'INCENDIE OU D'ELECTROCUTION, NE PAS EXPOSER L'APPAREIL A L'HUMIDITE OU A LA PLUIE.

Ce magnétoscope ne doit être utilisé que sur du courant alternatif en 120 V.

ATTENTION:
Afin d'éviter tout resque d'incendie ou d'électrocution, ne pas utiliser d'autres sources d'alimentation électrique.

REMARQUE:
La plaque d'identification (numéro de série) se trouve sur le panneau arrière de l'appareil.

WARNING:
The battery used in the DM-JV600U must be replaced by a JVC authorized service dealer only.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Note
Place a cover on the terminal not in use.
Static may cause a malfunction or failure of the unit.

Thank you for purchasing this

HDTV ENCODER DM-JV600U.

If should be noted that it may be unlawful to re-record pre-recorded tapes, records, or discs without the consent of the owner of copyright in the sound or video recording, broadcast or cable program and in any literary, dramatic musical, or artistic work embodied therein.

Prior to important video/ audio recording, always perform a test recording to confirm that video/ audio is properly recorded.
Please note that we will not provide compensation for contents of video/ audio recording due to improper video/ audio recording caused by defects when using this equipment.

Main Features

Encoded to MPEG-2(ISO/IEC13818-2)

Input SMPTE292M(1080i/720p) standard HDTV digital serial video signal, encode it to MPEG-2(ISO/IEC13818-2) and output as DVB-ASI TS(Transformed Stream).

Supports SDI embedded Audio signal 2 channels

Encodes SMPTE299M standard SDI embedded Audio signal 2 channels to MPEG-1Layer Ⅱ (ISO/IEC11172-3) and output as TS format.

Equipped with AES/EBU standard digital serial Audio input terminal

DM-JV600U is equipped with AES/EBU standard digital serial Audio input terminal. This unit is able to recieve audio signal from a unit which does not support with SDI embedded format.

Equipped with RS-232C terminal

Each feature can be set or operated on the front panel with FL display. Besides, this unit can be remote-controlled through the 9-pin connector on the rear panel.

1U EIA size can be mounted to the rack

Owing to the compact size design, it can be mounted to the EIA rack.

3-2 Pull down feature

By converting to the SMPTE292M (1080i/720p) standard HDTV digital serial video signal, input movie film image that is 24 frame per one second can also be compressed to high quality using 3-2 Pull down feature.

Equipped with ASI output terminal

Video recording is possible by connecting to D-VHS digital video recorder from JVC that is equipped with ASI input terminal.

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Precautions

Maintenance and operating environment

■ Do not store or use this equipment in the following environments. This will cause malfunctioning and damage.

- Locations beyond the allowable operating temperature range of 5 °C and 40 °C.
- Locations beyond the allowable operating humidity level of 30 % and 80 %.
- Near equipment that produces strong magnetic fields, such as transformers or motors.
- Near equipment that emits radio waves, such as transceivers and mobile phones.
- Locations with excessive dust and sand.
- Locations that are subject to excessive vibration.
- Locations prone to condensation.
- Locations that emit radiation, X-rays or corrosive gases.

Handling

■ Do not stack up the equipment to prevent temperature within from rising.

■ Do not stand this equipment vertically during use.

■ Handle this equipment with care. Do not subject it to physical shock.

■ Do not place heavy objects or ride on this equipment.
Placing heavy object such as TV monitor or placing bigger object than this unit may cause injury as the object may become unbalanced and fall.
In addition, the cover may deform due to the weight and the component inside may damage resulting in fire and electrical shock.

■ Wipe this equipment using soft rags.
Wiping with thinner or benzene may dissolve or tarnish its surface. For dirt that cannot be easily removed, wipe using a neutral detergent diluted with water, followed by wiping with a dry cloth.

■ Do not place object filled with water (vase, flowerpot, cup, cosmetics and medicine etc).
It will result in fire and electrical shock if water is spilt into the equipment.

■ Do not insert anything into the equipment. It will result in fire and electrical shock if metal or inflammable object is inserted from the ventilation hole.

Transportation

■ Turn off the power and unplug the power cord from AC outlet before transportation.
This may cause damage to power cord, fire or electrical shock.

■ **When moving or carrying the main unit, do no hold it by the front panel as this can easily be detached by pulling it toward you.**
If moving or carrying the main unit while holding it by the front panel, the main unit might be caused to fall as a result of the front panel becoming detached. Such an incident may cause unexpected injury or a malfunction of the main unit.

Saving Energy

■ Turn off the power to save energy when the equipment is not to be used for extensive periods of time.

Fan Replacement

Fans mounted on the inner side of front panel and rear panel are subject to wear and tear. Replace them every 3 years. It is recommended to fill in the provided label with replacement date and paste it on this unit.
Consult your local JVC dealer when replacing fan.

Power Cord

■ Do not use the power cord supplied with this equipment on other devices.

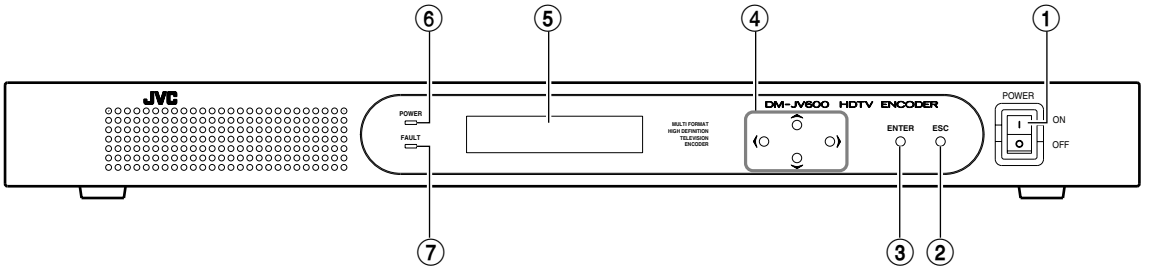
■ **Do not place heavy object on the power cord nor placing the power cord under this unit.**
This may cause damage to power cord, fire or electrical shock.

■ **Use the power cord supplied to this unit.**
Using the power cord with different voltage rating or damaged power cord may cause fire or electrical shock.

Precautions on operation

■ The display of this unit may appear 2 seconds after turning on the power. This is compliant to the regulation of high frequency of power supply and is not faulty.

Front Panel



① [POWER] Power switch

Switch to turn on/off power. After this is switched to ON, a “Now Initializing” will be displayed on the Display ⑤ of front panel before normal screen is displayed.

Memo After turning on the power, it may take 2 seconds before display light up.

② [ESC] button

Press this button when switching Display ⑤ on the front panel from menu setting display to normal display.
Changing of the setting value in Menu item can also be cancelled by this button.

③ [ENTER] button

Press this button when switching Display ⑤ on the front panel from normal display to menu setting display.
Changing of the setting value in Menu item can also be confirmed by this button.

Memo Refer to page 16 for changing the menu.

④ [▲ / ▼ / ◄ / ►] buttons

Press this button to select menu item or change the setting value of menu item during menu setting display.

⑤ Display

The operation status, error content and menu item of this unit will be displayed.
☞ Following item “About display”

⑥ [POWER] indicator

Light up in green during operation.

⑦ [FAULT] indicator

Light up in orange when error occurs on this unit.

About Display

■ Normal display

```
HDTV ENCODER
DM-JV600U
```

Press the ▲ / ▼ buttons

```
Local  Running
SYN:HD-IN START:Auto
```

- Display the control setting status of this unit
- Displays the current operation status
- Display the setting status of how encoding will start
- Display the setting status of reference synchronized signal

Press the ▲ / ▼ buttons

```
V:1080i  20000kbps
A:MPEG     384kbps
```

- Display the setting status of encoding of video signal
- Display the setting status of encoding of audio signal

■ Main Menu

```
Main Menu
+Configuration Menu
```

- Indicate that sub menu is present

■ Sub Menu

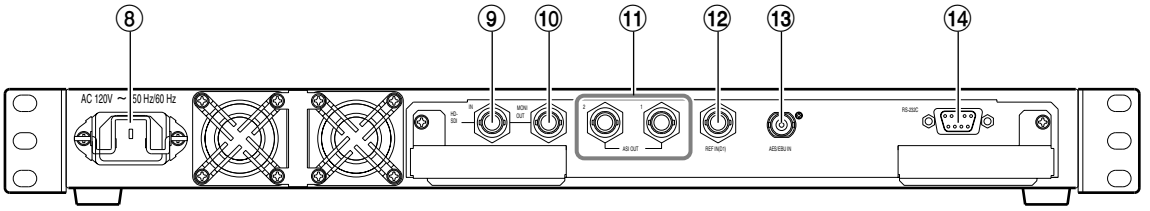
```
Configuration Menu
>Save & Reboot
```

- Indicate executable menu items or alterable menu setting value

```
Status Menu
-Status      :Running
```

- Indicate that sub menu is not present

Rear Panel



⑧ [AC IN] Power input terminal

Use the power cord supplied to connect to an AC 120 V 50 Hz/60 Hz outlet.

⑨ [HD-SDI IN] Video signal input terminal (BNC)

Input terminal for HD serial digital video signal.
This terminal also receives audio signal when audio signal is embedded into HD serial digital video signal.
Connect to the HD serial digital video signal output terminal of the device outputting video signal.

⑩ [HD-SDI MONI OUT] Video signal output terminal (BNC)

Output terminal for through HDTV serial digital video signal.
For checking the video signal inputted into HD-SDI IN video signal input terminal ⑨ on the rear panel.

Memo The output signal of HD-SDI MONI.OUT terminal that has not gone through re-clock process cannot be used as a formal SMPTE292M (1080i/720p) standard HDTV serial digital video signal.

⑪ [ASI OUT] Video signal output terminal (BNC ×2)

TS output terminal.Encodes and outputs the video signal inputted into HD-SDI IN video signal input terminal ⑨ and the audio signal inputted into AES/EBU IN terminal ⑬.
This terminal also outputs encoded audio signal when audio signal is embedded into HD serial digital video signal.

Memo The audio signal may mix with noise when this unit is unable to synchronize with the connected device or when the input signal (external reference synchronized signal, HD-SDI signal or AES/EBU signal) is interrupted.

⑫ [REF IN (D1)] External reference synchronized signal input terminal (BNC)

Input external reference synchronized signal.
For reference synchronized signal, use the signal that is compliant to SMPTE259M (D1).

Memo When using the external reference synchronized signal input terminal, set the Sync Mode item in the Configuration Menu to “REF”.
☞ Page 13 “Configuration Menu”

Cautions
- When using the external reference synchronized signal, keep the phase difference of external reference synchronized signal and input video signal within ±5H (1H: D1signal cycle). (Phase zero is defined when the forth pin of D1 signal matches with first pin of input video signal.)
- Input D1 signal before turning on the power of this unit. The encoding may not start if D1 signal is not input when the power of this unit is turned on.

⑬ [AES/EBU IN] Audio signal input terminal (BNC)

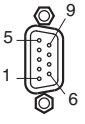
Input terminal for digital audio signal. Connect to the digital audio signal output terminal of the device outputting audio signal.

Memo When using the audio signal input terminal, set the audio input item in the Configuration Menu to “AES/EBU”.
☞ Page 13 “Configuration Menu”

⑭ [RS-232C]Remote terminal (D-sub 9pin)

By connecting to the device for remote control, control of this unit can be performed externally.

■ Pin assignment of RS-232C remote terminal

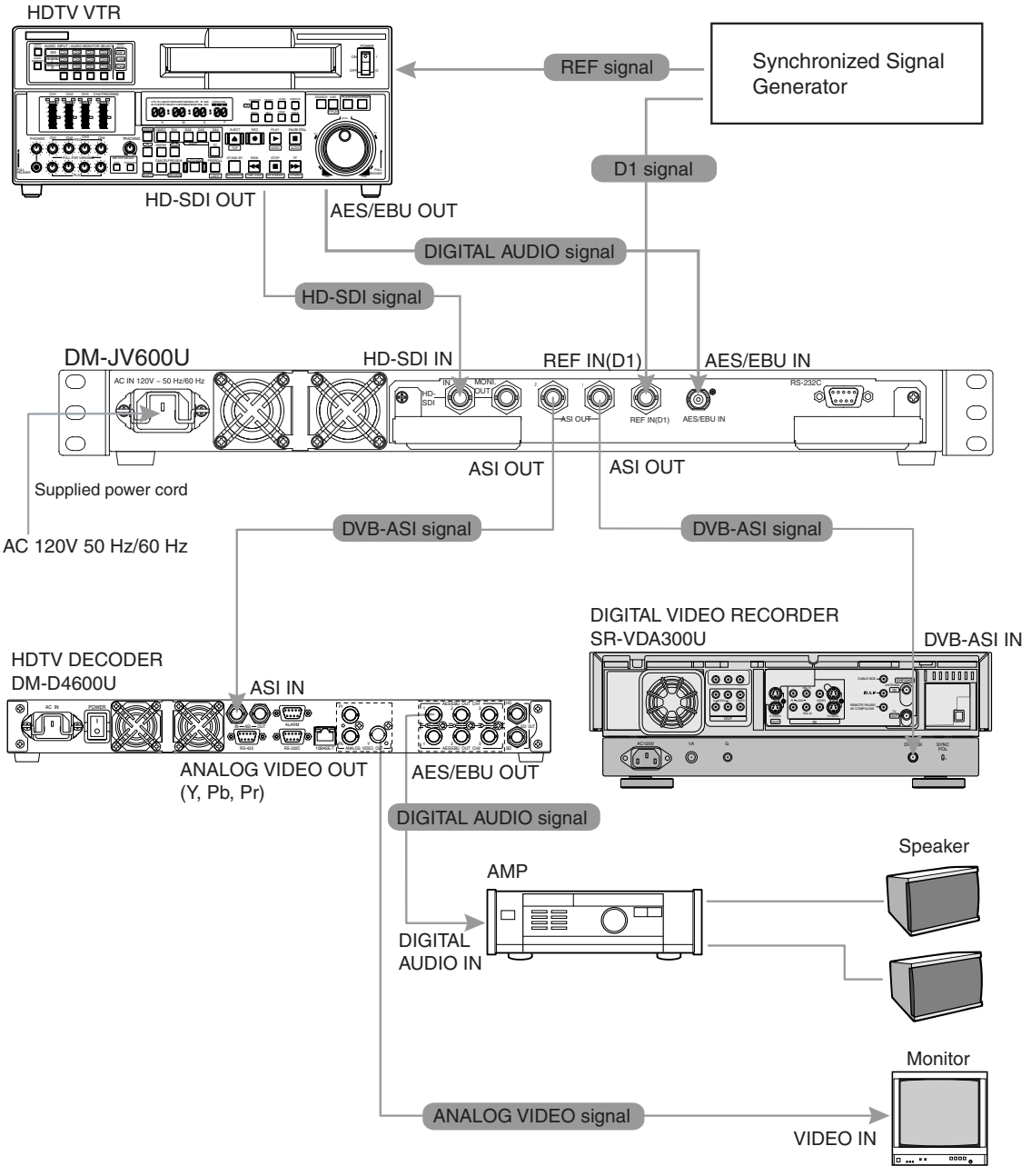


Pin No.	Signal name	Content
1	N.C	
2	RxD	Received data
3	TxD	Transmitted data
4	N.C	
5	SG	Ground
6	N.C	
7	N.C	
8	N.C	
9	N.C	

Tranfer speed	38.4 kbps
Data bit	8 bit
Parity	None
StopBit	1 bit
Flow Control	None

Connecting

One example of the basic systems using this unit is described below.
Turn OFF the power of all devices before connecting or disconnecting.



Cautions

If there is interruption of input signal due to switching of HD-SDI input signal or reconnection of signal cable, video or audio signal may not output for about 20 seconds.

For the audio signal to be input to AES/EBU IN terminal, use the 48 kHz audio signal that is synchronized with video signal.

Use the following specified cables to avoid misoperation.
- HD-SDI input cable : 5C-FB, less than 10 m
- HD-SDI monitor output cable : 5C-FB, less than 3 m

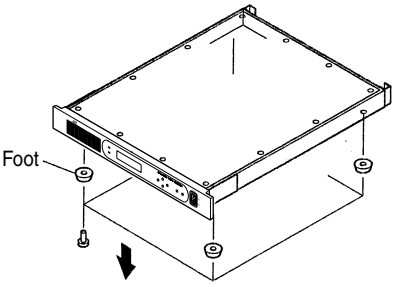
This unit may output a full-screen grey signal depends on the following input signal status.
- When the input video signal that is not compliant to SMPTE292M (1080i/720p) is detected
- If the phase difference against input video signal exceeds the range of ±5H when synchronizing to external signal generator

Mounting to a Rack

By making use of the hole on inner side of front panel, this unit can be mounted to EIA rack.

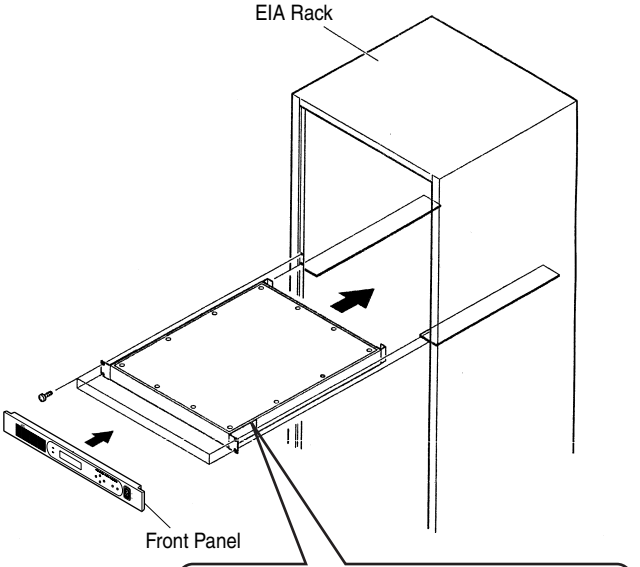
Caution

- When mounting this unit to rack, mount the L shape bracket to both ends of the rack to ensure strength.
- When mounting to the rack, mount it in the way such that this unit will not protrude out from the rack.
  (The depth of the rack should be at least 700 mm)



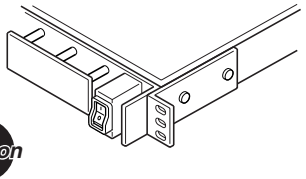
1 Remove the foot

2 Remove the front panel



3 Mount this unit to rack using the supplied 4 screws

4 Return the front panel to its original status

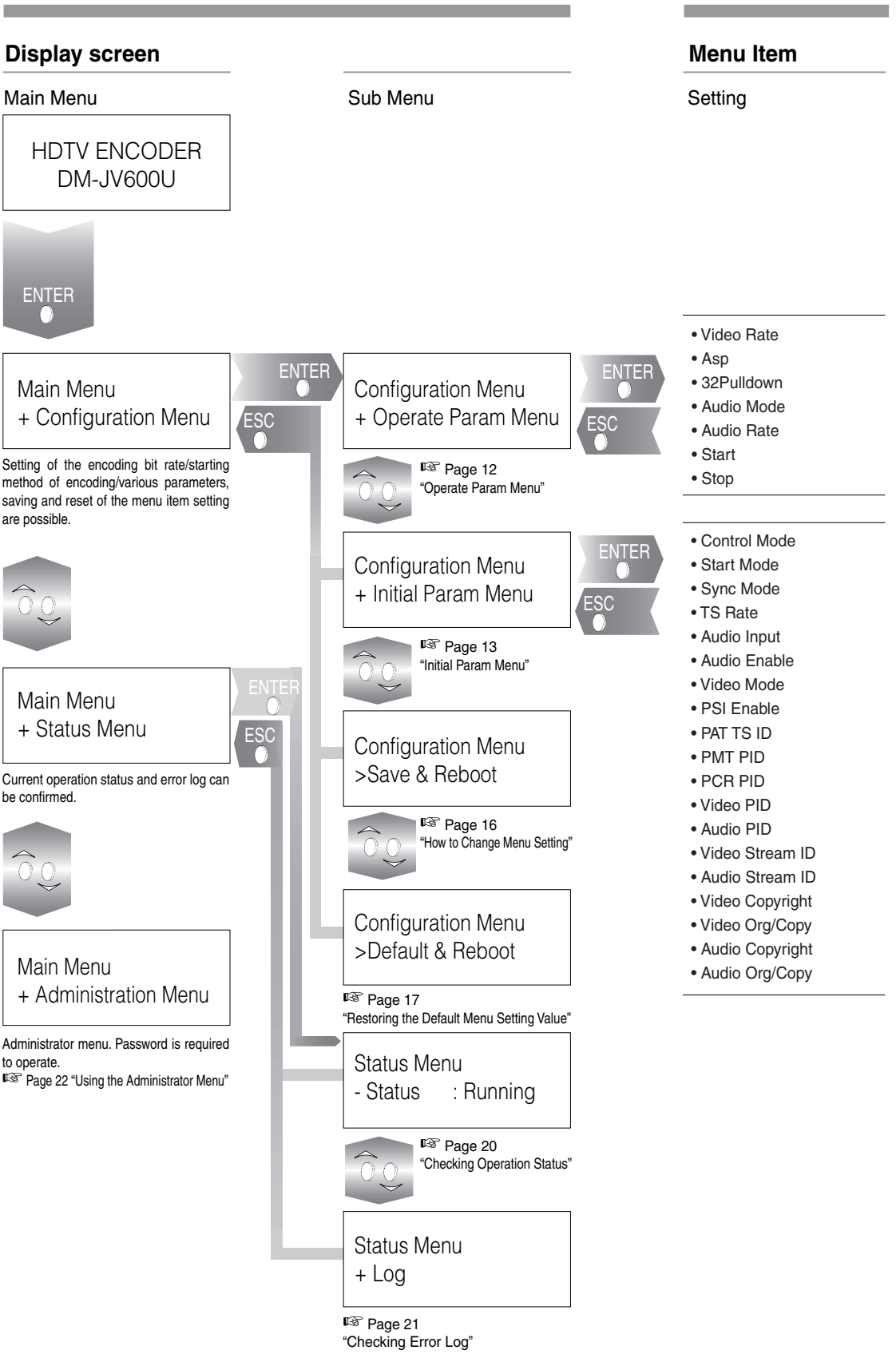


Caution

Do not remove the mounting bracket.The mounting may become unstable due to loosen screws. In addition, if the mounting direction of the bracket is wrong, it will be extremely dangerous as the bracket will not be properly mounted onto the rack.

Menu Flow Chart

The menu of this unit consists of 3 level of menus namely “Main menu”, “Sub menu” and “Setting items”.



Menu Setting

Configuration Menu

● : Default setting

Item	Setting value	Content
Operate Param Menu		
Video Rate	9000kbps to 20000kbps ● to 40000kbps	Set the bit rate of the encoded video signal. The setting value can be set in 10 kbps step.
Asp	■ When the Video Mode item in the menu is set to “1080i” 16:9 1920 × 1080 ● 16:9 1440 × 1080 16:9 1280 × 1080 ■ When the Video Mode item in the menu is set to “720p” 16:9 1280 × 720	Set the aspect ratio and resolution of the encoded video signal. 16:9 1920 × 1080: Encode with 1920(H) × 1080(V) size 16:9 1440 × 1080: Encode with 1440(H) × 1080(V) size 16:9 1280 × 1080: Encode with 1280(H) × 1080(V) size 16:9 1280 × 720: Encode with 1280(H) × 720(V) size
32Pulldown	Auto ● OFF	Set the 3-2 Pulldown. Auto : Perform 3-2 Pulldown process automatically depends on the video signal. OFF : Does not perform 3-2 Pulldown process. ☞ Page 26 “3-2 Pulldown”
Audio Mode	Stereo ● Single	Set the channel mode of the audio encoded signal. Stereo : Encode with stereo mode. Single : Encode with single channel mode (monaural).
Audio Rate	■ When the Audio Mode item in the menu is set to “Stereo” 384kbps ● 256kbps 192kbps ■ When the Audio Mode item in the menu is set to “Single” 192kbps 128kbps 96kbps	Set the bit rate of the encoded audio signal.
Start		Start the encoding. ☞ Page 18 “Starting the Encoding”
Stop		Stop the encoding. ☞ Page 19 “Starting the encoding manually”

Memo

The Video Rate setting value can be set below 700 kbps from the TS Rate item setting value in the Initial Param Menu.
Example>
When the TS Rate item is set to 21000 kbps
↓
Video Rate item can be set below 20300 kbps.

Memo

The setting value of the Audio Rate item in the Operate Param Menu may change if Audio Mode setting is changed.

Configuration Menu

● : Default setting

Item	Setting value	Content
Initial Param Menu		
Control Mode	Local ● Remote	Set the operation mode of this unit. Local : Set to this mode when operating this unit using the buttons on the front panel. Remote : Set to this mode when using RS-232C terminal ⑭ on the rear panel to perform remote control of this unit.
Start Mode	Auto ● Manual	Set the starting mode of encoding. Auto : Start the encoding automatically. Manual : Start the encoding using the menu. ☞ Page 18 “Starting the Encoding”
Sync Mode	HD-IN ● REF	Set the synchronized signal that is the reference for encoding. HD-IN : Synchronize with the input video signal. REF : Synchronize with the D1 signal input into REF IN terminal ⑫ on the rear panel.
TS Rate	9700kbps to 21000kbps ● to 50000kbps	Set the TS bit rate. The setting value can be changed in 10 kbps step.
Audio Input	EMB ● AES/EBU	Select the input audio signal. EMB : Encode the Embedded audio signal input into HD-SDI IN terminal ⑨ on the rear panel. AES/EBU : Encode the audio signal input into AES/EBU terminal ⑬ on the rear panel.
Audio Enable	ON ● OFF	Set whether to output audio signal or not. ON : Output audio information. OFF : Does not output audio information.
Video Mode	1080i ● 720p	Set the Video Mode. Encode with 1080i: 1080i format. Encode with 720p: 720p format.

Memo

When input video signal is used in synchronized mode, video signal may not output for about 20 seconds due to switching of signal or reconnection of signal cable.

Memo

The setting value of the Video Rate item in the Operate Param Menu may change if TS Rate setting value is changed.

Memo

The setting value of the Asp item in the Operate Param Menu may change if Video Mode setting value is changed.

Menu Setting

Configuration Menu (continued)

● : Default setting

Item	Setting value	Content
Initial Param Menu		
PSI Enable	ON● OFF	Set the PSI to ON/OFF.
PAT TS ID	0001 to 0001● to FFFF	Set the ID of PAT TS.
PMT PID	0010 to 0010● to 1FFE	Set the PMT PID.
PCR PID	0010 to 0101● to 1FFE	Set the PCR PID.
Video PID	0020 to 0102● to 1FFE	Set the Video PID.
Audio PID	0020 to 0103● to 1FFE	Set the Audio PID.
Video Stream ID	E0 to E0● to EF	Set the ID of Video PES stream.

Configuration Menu (continued)

● : Default setting

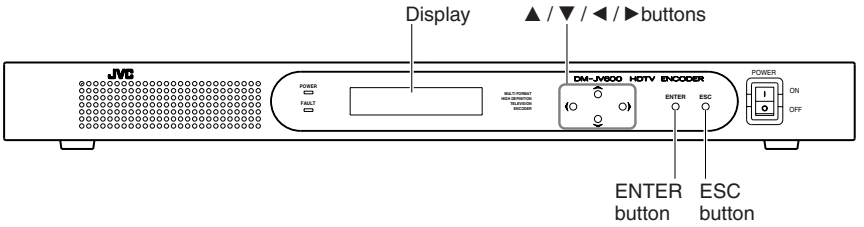
Item	Setting value	Content
Initial Param Menu		
Audio Stream ID	C0 to C0● to DF	Set the ID of Audio PES stream.
Video Copyright	OFF● ON	Set the copyright flag of Video PES. OFF : Set the copyright flag of Video PES to OFF. ON : Set the copyright flag of Video PES to ON.
Video Org/Copy	Org● Copy	Set the Original/ Copy of Video PES. Org : Set the Video PES to Original. Copy : Set the Video PES to Copy.
Audio Copyright	OFF● ON	Set the copyright flag of Audio PES. OFF : Set the copyright flag of Audio PES to OFF. ON : Set the copyright flag of Audio PES to ON.
Audio Org/Copy	Org● Copy	Set the Original/ Copyright flag of Audio PES. Org : Set the Audio PES to Original. Copy : Set the Audio PES to Copy.
Save & Reboot		Save the setting value of the menu and restart this unit. ☞ Page 18 “Starting the Encoding”
Default & Reboot		Return the setting value of the menu to default and restart this unit. ☞ Page 17 “Restoring the Default Menu Setting Value”

How to Change Menu Setting

The various features of this unit can be set using the menu. The setting value, which is stored in the internal memory will reappear upon turning on the power.

■ Example
Remote control of this unit can be achieved by using the RS-232C terminal on the rear panel.

[Configuration Menu]
↓
[Initial Param Menu]
↓
[Control Mode]
↓
“Remote”



Operation Flow Chart

1 Press the ENTER button
Main Menu screen will be displayed.

2 Press the ▲ / ▼ buttons
Select the Configuration Menu.

3 Press the ENTER button
Configuration Menu screen will be displayed.

4 Press the ▲ / ▼ buttons
Select the Initial Param Menu.

5 Press the ENTER button
Initial Param Menu screen will be displayed.

6 Press the ▲ / ▼ buttons
Select the Control Mode item and press the ENTER button.

7 Press the ▲ / ▼ buttons
Select the “Remote” and press the ENTER button.

8 Press the ESC button

9 Press the ENTER button

Display Flow Chart

Main Menu
+Configuration Menu

Main Menu
+Configuration Menu

Configuration Menu
+Operate Param Menu

Configuration Menu
+Initial Param Menu

Initial Param Menu
>Control Mode :Local

Initial Param Menu
>Control Mode: Local

Initial Param Menu
>Control Mode:Remote

Initial Param Menu
>Save & Reboot ?

..Now Initializing..

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DM-JV600U

Memo

The Operate Param Menu setting will be reflected in the output even if “Save & Reboot” is not executed.

Caution

Do not turn off the power switch during “Now Initializing” display.
The setting value may not be saved or may return to default setting.

Restoring the Default Menu Setting Value

Each feature that has been set using the menu can be returned to default (factory setting).
All the menu settings return to default.

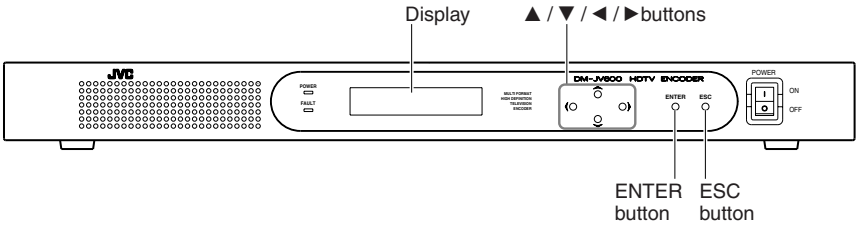
Operation Flow Chart	Display Flow Chart
1 Press the ENTER button Main Menu screen will be displayed.	Main Menu +Configuration Menu
2 Press the ▲ / ▼ buttons Select the Configuration Menu.	Main Menu +Configuration Menu
3 Press the ENTER button Configuration Menu screen will be displayed.	Configuration Menu +Operate Param Menu
4 Press the ▲ / ▼ buttons Select the Default & Reboot.	Configuration Menu >Default & Reboot
5 Press the ENTER button Execution confirmation screen will be displayed.	Configuration Menu >Default & Reboot ?
6 Press the ENTER button Setting to default of the menu setting and reboot of this unit will be performed.	..Now Initializing.. ▼ HDTV ENCODER DM-JV600U

Caution

Do not turn off the power switch during "Now Initializing" display.

Starting the Encoding

There are 2 ways to start the encoding. One is to start the encoding automatically and the other one is to start it manually by setting the menu.



Start the encoding automatically

Operation Flow Chart

1 Press the ENTER button

Display the Initial Param Menu screen according to steps 1~5 on Page 16 “How to Change Menu Setting”.

2 Press the ▲ / ▼ buttons

Select the Start Mode item and press the ENTER button.

3 Press the ▲ / ▼ buttons

Select the “Auto” and press the ENTER button.

4 Press the ESC button

5 Press the ENTER button

The encoding will start after the menu setting is saved and reboot of this unit is performed.

Display Flow Chart

```
Initial Param Menu
>Control Mode :Local
```

```
Initial Param Menu
>Start Mode   :Auto
```

```
Initial Param Menu
>Start Mode   :Auto
```

```
Initial Param Menu
>Save & Reboot ?
```

```
..Now Initializing..
```

```
HDTV ENCODER
DM-JV600U
```

Memo

The default setting of the Start Mode item is set to “Auto” in order to start the encoding automatically.

☞ Page 13 “Start Mode item”

Memo

The encoding can be manually started or stopped if the Start Mode item in the menu is set to “Manual”.

☞ Page 19 “Start the encoding manually”

■ Set the Start Mode item in the menu to “Manual” according to the procedure on ☞ Page 18 “Start the encoding automatically”.

Start the encoding manually

Operation Flow Chart

Display Flow Chart

1 Press the ENTER button
Main Menu screen will be displayed.

Main Menu
+Configuration Menu

2 Press the ▲ / ▼ buttons
Select the Configuration Menu and press the ENTER button.

Configuration Menu
+Operate Param Menu

3 Press the ▲ / ▼ buttons
Select the Operate Param Menu and press the ENTER button.

Operate Param Menu
VideoRate:20000kbps

4 Press the ▲ / ▼ buttons
Select the Start item and press the ENTER button.

Operate Param Menu
>Start?

5 Press the ENTER button
This starts the encoding.

Stop the encoding manually

Operation Flow Chart

Display Flow Chart

1 Press the ENTER button
Main Menu screen will be displayed.

Main Menu
+Configuration Menu

2 Press the ▲ / ▼ buttons
Select the Configuration Menu and press the ENTER button.

Configuration Menu
+Operate Param Menu

3 Press the ▲ / ▼ buttons
Select the Operate Param Menu and press the ENTER button.

Operate Param Menu
VideoRate:20000kbps

4 Press the ▲ / ▼ buttons
Select the Stop item and press the ENTER button.

Operate Param Menu
>Stop?

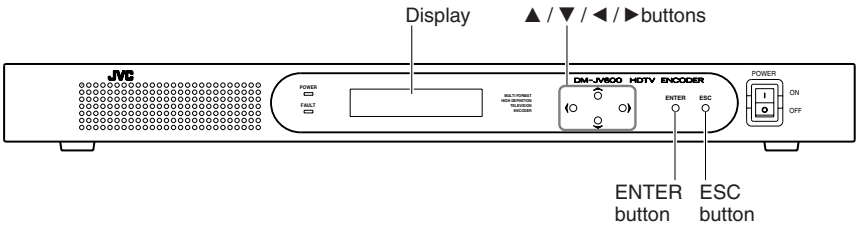
5 Press the ENTER button
Stop the encoding.

Memo

The encoding will stop if menu item has been changed during manual encoding and “>Save&Reboot” has been excecuted.
Start the encoding manually once again.

Checking Operation Status

The operation status of this unit can be confirmed from the display.



Operation Flow Chart

1 Press the ENTER button

Main Menu screen will be displayed.

2 Press the ▲ / ▼ buttons

Select the Status Menu.

3 Press the ENTER button

Status Menu screen will be displayed.

4 Press the ▲ / ▼ buttons

Current operation status will be displayed by selecting the Status item.

Display Flow Chart

Main Menu +Configuration Menu	
Main Menu +Status Menu	
Status Menu -Status :Running	
Status Menu -Status :Running	
Status Menu -Status :Running	Indicate that the encoding is in process.
Status Menu -Status :Ready	Indicate that the encoding is in standby status.
Status Menu -Status :Fatalerror	Indicates that fatal error has occurred. ☞ Page 24 “Error Log”

Memo

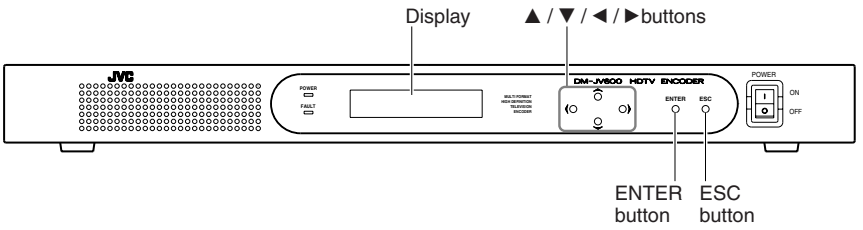
Checking Error Log

The error occurrence can be confirmed on the display. Up to 64 occurrences can be stored.

Operation Flow Chart	Display Flow Chart
1 Press the ENTER button Main Menu screen will be displayed.	Main Menu +Configuration Menu
2 Press the ▲ / ▼ buttons Select the Status Menu.	Main Menu +Status Menu
3 Press the ENTER button Status Menu screen will be displayed.	Status Menu -Status :Running
4 Press the ▲ / ▼ buttons Select the Log item and press the ENTER button.	Status Menu +Log
5 Press the ▲ / ▼ buttons The error log stored will be displayed. For detailed error log display, read page 24 “Error log”.	00:Feb07 14:06 0001 -system boot

Using the Administrator Menu

The information regarding built-in program or firmware version can be obtained from the Administrator Menu.



Operation Flow Chart

1 Press the ENTER button

Main Menu screen will be displayed.

2 Press the ▲ / ▼ buttons

Select the Administration Menu.

3 Press the ENTER button

The screen for confirming the password will be displayed.

4 Press the ▲ / ▼ / ◄ / ► buttons

Type password (4649) and press ENTER.

- Move the cursor with ◄ / ► buttons.
- Increase or decrease the figure of password with ▲ / ▼ buttons.

5 Press the ▲ / ▼ buttons

Select the item to be displayed on the display.

Display Flow Chart

```
Main Menu
+Configuration Menu
```

```
Main Menu
+Administration Menu
```

```
Administration Menu
>Password?    :0000
```

```
Administration Menu
>Password?    :4649
```

```
Administration Menu
-Model    :DM-JV600U
```

Memo

The password for administrator is set as “4649”.

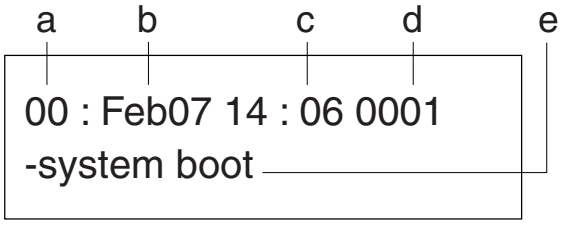
Administration menu

Item	Content
Model	Displays the model name.
SerNo	Displays the serial number.
Firm	Displays the firmware version.
Ucode	Displays the version of the µ code.
Boot	Displays the version of boot program.
MISC FPGA	Displays the version of MISC FPGA.
STC FPGA	Displays the version of STC FPGA.
I/O PWB	Displays the version of I/O PWB.
I/O VI PLD	Displays the version of I/O VI PLD.
I/O AU PLD	Displays the version of I/O AU PLD.

Error Log

The stored error log can be displayed by performing the operation on page 21 “Checking Error Log”.
The error content is displayed by error code.

Display



a: Error log No.
b: Error occurrence date
c: Error occurrence time
d: Error code
e: Error content

* For the error content with plenty of characters, press the ◄ / ► buttons to scroll the display.
* The date and hour of this unit is adjusted to Greenwich Mean Time (GMT).

Error code

Error code:Error content	Cause of error	Troubleshooting
0001: system boot	Restart of this unit has been performed.	
0020: communication error	The communication error caused by control device communication has occurred.	Confirm the connection to external device. Confirm the setting of external device.
0021: command parameter error	The value of command and parameter created by control device communication is abnormal.	
0022: command busy	This unit has received action command when it is busy.	
0040: sync input error	The synchronized signal cannot be detected.	Confirm the connection to external synchronized signal generator and the synchronized signal itself.
0041: sync input error recover		
0050: sync no input timeout error	The detection of the synchronized signal has timed out when this unit restarts.	
0080: enc hardware video input error	The video input signal is abnormal.	Confirm the connection between HD-SDI IN terminal and connected device. Confirm the signal input into HD-SDI IN terminal
0081: enc hardware video input error recover		
0084: enc hardware audio input error	The audio input signal is abnormal.	Confirm the connection between AES/EBU IN terminal and connected device. Confirm the signal input into AES/EBU IN terminal.
0085: enc hardware audio input error recover		
0088: enc hardware resync	Resync process has occured when synchronizing to video input signal.	Confirm the connection between HD-SDI IN terminal and connected device(Frequent reconnection of the connector may cause the error). Confirm the signal input into HD-SDI IN terminal.

Error code

Error code:Error content	Cause of error	Troubleshooting
0002: parameter error	The content of the internal parameter (default parameter and others) is abnormal.	This unit is abnormal. Switch the power to “OFF” and turn on the power again. Consult your local JVC dealer if the problem is still unsolved.
0008: FAN stop error	FAN operation is abnormal.	
0009: FAN stop error recover		
001a: FAN stop timeout error		
0013: hardware fatal error	The hardware of this unit is abnormal.	
0014: software fatal error	The software of this unit is abnormal.	
0015: system boot fatal error	The restart of this unit is abnormal.	
0044: video frame interrupt timeout error	The interruption of video frame has timed out.	
0045: video frame interrupt timeout error recover		
0060: domino chip running error	The IC inside this unit is abnormal.	
0061: domino chip running error recover		
0072: domino chip boot fatal error		
0073: domino chip running fatal error		
00a0: enc software video input error	The process of the input stage of video signal is abnormal.	
00a1: enc software video input error recover		
00a2: enc software video running error		
00a3: enc software video running error recover		
00a8: enc software audio input error	The process of the input stage of audio signal is abnormal.	
00a9: enc software audio input error recover		
00aa: enc software audio running error		
00ab: enc software audio running error recover		

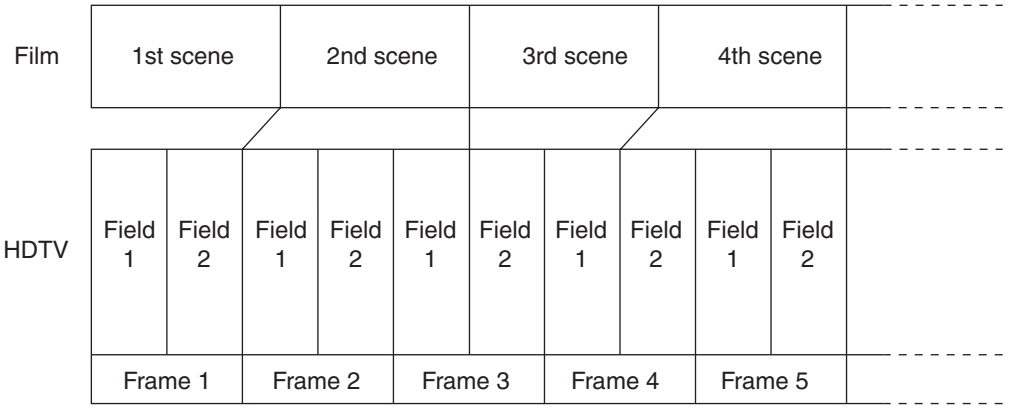
3-2 Pulldown

Converting from movie film image to HDTV image

It is required to convert the video signal (Pulldown) in order to view the image recorded with 24 frames per second such as movie film on a system for HDTV video signal that is 30 frames per second (60 field) used in TV broadcasting.This unit has achieved in converting the video signal using the method known as 3-2 Pulldown (2-3 Pulldown).

3-2 Pulldown method (2-3 Pulldown)

For 3-2 Pulldown method, the odd number frame is converted to 2 fields and the even number frame is converted to 3 fields. Therefore, 2 frames are converted to 5 fields and this enables the conversion to 60 fields with 24 frames.



Specifications

<Input signal>

■ Video input

HD SDI IN ×1	SMPTE292M (common for 1080i/720p) 800 mVp-p, 75 Ω (BNC unbalanced) 1080i:1920 × 1080 frame frequency 29.97Hz 720p:1280 × 720 frame frequency 59.94Hz

■ Audio input

AES/EBU IN ×1	SMPTE299M (48 kHz sampling frequency synchronized with video signal)

■ Synchronized input

REF IN ×1	SMPTE259M 800 mVp-p, 75 Ω (BNC unbalanced)

<Output signal>

■ Video output

MONITOR OUT ×1	SMPTE292M(common for 1080i/720p) 800 mVp-p, 75 Ω (BNC unbalanced)
ASI OUT ×2	DVB/ASI(188byte format,packet mode) 800 mVp-p, 75 Ω (BNC unbalanced)

<Video encoding>

MPEG-2 (ISO/IEC13818-2)	Video encoding profile	Video bit rate
	1080i MP@HL 1920 × 1080 59.94 Hz	9Mbps~40 Mbps
	1080i MP@HL 1440 × 1080 59.94 Hz	9Mbps~40 Mbps
	1080i MP@HL 1280 × 1080 59.94 Hz	9Mbps~40 Mbps
	720p MP@HL 1280 × 720 59.94 Hz	9Mbps~40 Mbps

<Audio encoding>

MPEG-1 Layer Ⅱ (ISO/IEC11172-3)	● Stereo mode		● Single mode	
	Bit rate	384 kbps	Bit rate	192 kbps
		256 kbps		128 kbps
		192 kbps		96 kbps
	Sampling	48 kHz	Sampling	48 kHz

<General>

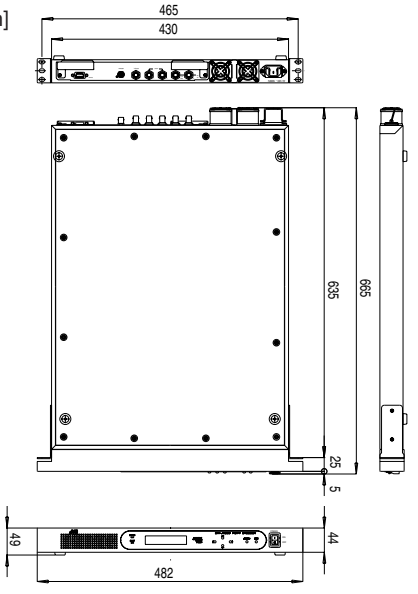
■ Interface	RS-232C ×1
■ Power supply	AC 120 V 50 Hz/60 Hz
■ Power consumption	70 W , 0.6 A
■ Allowable operating temperature	5 °C to 40 °C
■ Allowable storage temperature	–20 °C to 60 °C
■ Allowable operating humidity	30 % to 80 %
■ Mass	Approx. 10 kg

<Accessories>

■ Instruction Manual ..... ×1
■ Power cord (2.4 m) ..... ×1
■ Screws for mounting rack ... ×4
■ Label ..... ×1

<Appearance>

[unit : mm]



*Specifications and appearance of this unit are subject to change for improvement without prior notice.

DM-JV600U HDTV ENCODER

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